

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.0	
3	1727.5	22.55	126.00	1698.6	-128.7	177.2	2.00	126.00	216.3	
4	3678.0	22.55	126.00	3500.0	-568.4	782.3	0.00	0.00	954.9	
5	4026.5	22.55	144.24	3822.3	-662.0	875.6	2.00	98.47	1087.0	
6	5953.1	22.55	144.24	5601.6	-1261.5	1307.2	0.00	0.00	1816.3	
7	7080.4	0.00	0.00	6700.0	-1439.1	1435.1	2.00	180.00	2032.4	TARGET BHL 2501'FSL, 2570'FEL
8	8298.4	0.00	0.00	7918.0	-1439.1	1435.1	0.00	0.00	2032.4	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.33-T5N-R66W

Ashton J33-21D Pad Sec.33-T5N-R66W

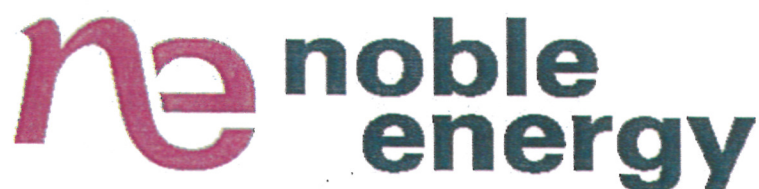
Ashton J33-21D

Wellbore #1

Plan: Plan #2 (08-04-09)

Standard Planning Report

12 August, 2009



Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Ashton J33-21D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4818.0ft (Original Well Elev)
Project:	SEC.33-T5N-R66W	MD Reference:	WELL @ 4818.0ft (Original Well Elev)
Site:	Ashton J33-21D Pad Sec.33-T5N-R66W	North Reference:	True
Well:	Ashton J33-21D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (08-04-09)		

Project	SEC.33-T5N-R66W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Ashton J33-21D Pad Sec.33-T5N-R66W		
Site Position:		Northing:	1,374,007.87 ft
From:	Lat/Long	Easting:	3,198,704.75 ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	40° 21' 28.296 N
		Longitude:	104° 47' 13.128 W
		Grid Convergence:	0.46 °

Well	Ashton J33-21D		
Well Position	+N/-S	746.8 ft	Northing:
	+E/-W	-691.2 ft	Easting:
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	40° 21' 35.676 N
		Longitude:	104° 47' 22.056 W
		Ground Level:	4,805.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	6/19/2008	9.24	67.12	53,439

Design	Plan #2 (08-04-09)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	135.08

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,727.5	22.55	126.00	1,698.6	-128.7	177.2	2.00	2.00	0.00	126.00	
3,678.0	22.55	126.00	3,500.0	-568.4	782.3	0.00	0.00	0.00	0.00	
4,026.5	22.55	144.24	3,822.3	-662.0	875.6	2.00	0.00	5.23	98.47	
5,953.1	22.55	144.24	5,601.6	-1,261.5	1,307.2	0.00	0.00	0.00	0.00	
7,080.4	0.00	0.00	6,700.0	-1,439.1	1,435.1	2.00	-2.00	0.00	180.00	TARGET BHL 2501
8,298.4	0.00	0.00	7,918.0	-1,439.1	1,435.1	0.00	0.00	0.00	0.00	

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Ashton J33-21D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4818.0ft (Original Well Elev)
Project:	SEC.33-T5N-R66W	MD Reference:	WELL @ 4818.0ft (Original Well Elev)
Site:	Ashton J33-21D Pad Sec.33-T5N-R66W	North Reference:	True
Well:	Ashton J33-21D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (08-04-09)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
440.0	0.00	0.00	440.0	0.0	0.0	0.0	0.00	0.00	0.00
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	0.00
520.0	0.00	0.00	520.0	0.0	0.0	0.0	0.00	0.00	0.00
560.0	0.00	0.00	560.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
640.0	0.80	126.00	640.0	-0.2	0.2	0.3	2.00	2.00	0.00
680.0	1.60	126.00	680.0	-0.7	0.9	1.1	2.00	2.00	0.00
720.0	2.40	126.00	720.0	-1.5	2.0	2.5	2.00	2.00	0.00
760.0	3.20	126.00	759.9	-2.6	3.6	4.4	2.00	2.00	0.00
800.0	4.00	126.00	799.8	-4.1	5.6	6.9	2.00	2.00	0.00
840.0	4.80	126.00	839.7	-5.9	8.1	9.9	2.00	2.00	0.00
880.0	5.60	126.00	879.6	-8.0	11.1	13.5	2.00	2.00	0.00
920.0	6.40	126.00	919.3	-10.5	14.4	17.6	2.00	2.00	0.00
960.0	7.20	126.00	959.1	-13.3	18.3	22.3	2.00	2.00	0.00
1,000.0	8.00	126.00	998.7	-16.4	22.6	27.5	2.00	2.00	0.00
1,040.0	8.80	126.00	1,038.3	-19.8	27.3	33.3	2.00	2.00	0.00
1,080.0	9.60	126.00	1,077.8	-23.6	32.5	39.6	2.00	2.00	0.00
1,120.0	10.40	126.00	1,117.1	-27.7	38.1	46.5	2.00	2.00	0.00
1,160.0	11.20	126.00	1,156.4	-32.1	44.1	53.9	2.00	2.00	0.00
1,200.0	12.00	126.00	1,195.6	-36.8	50.6	61.8	2.00	2.00	0.00
1,240.0	12.80	126.00	1,234.7	-41.8	57.6	70.3	2.00	2.00	0.00
1,280.0	13.60	126.00	1,273.6	-47.2	65.0	79.3	2.00	2.00	0.00
1,320.0	14.40	126.00	1,312.4	-52.9	72.8	88.9	2.00	2.00	0.00
1,360.0	15.20	126.00	1,351.1	-58.9	81.1	99.0	2.00	2.00	0.00
1,400.0	16.00	126.00	1,389.6	-65.2	89.8	109.6	2.00	2.00	0.00
1,440.0	16.80	126.00	1,428.0	-71.9	98.9	120.7	2.00	2.00	0.00
1,480.0	17.60	126.00	1,466.2	-78.8	108.5	132.4	2.00	2.00	0.00
1,520.0	18.40	126.00	1,504.3	-86.1	118.5	144.6	2.00	2.00	0.00
1,560.0	19.20	126.00	1,542.1	-93.7	128.9	157.4	2.00	2.00	0.00
1,600.0	20.00	126.00	1,579.8	-101.6	139.8	170.6	2.00	2.00	0.00
1,640.0	20.80	126.00	1,617.3	-109.7	151.1	184.4	2.00	2.00	0.00
1,680.0	21.60	126.00	1,654.6	-118.2	162.8	198.7	2.00	2.00	0.00
1,720.0	22.40	126.00	1,691.7	-127.1	174.9	213.5	2.00	2.00	0.00
1,727.5	22.55	126.00	1,698.6	-128.7	177.2	216.3	2.00	2.00	0.00
1,760.0	22.55	126.00	1,728.6	-136.1	187.3	228.6	0.00	0.00	0.00
1,800.0	22.55	126.00	1,765.6	-145.1	199.7	243.7	0.00	0.00	0.00
1,840.0	22.55	126.00	1,802.5	-154.1	212.1	258.9	0.00	0.00	0.00
1,880.0	22.55	126.00	1,839.5	-163.1	224.5	274.0	0.00	0.00	0.00
1,920.0	22.55	126.00	1,876.4	-172.1	236.9	289.2	0.00	0.00	0.00
1,960.0	22.55	126.00	1,913.3	-181.1	249.3	304.3	0.00	0.00	0.00
2,000.0	22.55	126.00	1,950.3	-190.2	261.7	319.5	0.00	0.00	0.00
2,040.0	22.55	126.00	1,987.2	-199.2	274.1	334.6	0.00	0.00	0.00
2,080.0	22.55	126.00	2,024.2	-208.2	286.6	349.8	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Ashton J33-21D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4818.0ft (Original Well Elev)
Project:	SEC.33-T5N-R66W	MD Reference:	WELL @ 4818.0ft (Original Well Elev)
Site:	Ashton J33-21D Pad Sec.33-T5N-R66W	North Reference:	True
Well:	Ashton J33-21D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (08-04-09)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
2,120.0	22.55	126.00	2,061.1	-217.2	299.0	364.9	0.00	0.00	0.00
2,160.0	22.55	126.00	2,098.0	-226.2	311.4	380.1	0.00	0.00	0.00
2,200.0	22.55	126.00	2,135.0	-235.2	323.8	395.2	0.00	0.00	0.00
2,240.0	22.55	126.00	2,171.9	-244.3	336.2	410.4	0.00	0.00	0.00
2,280.0	22.55	126.00	2,208.9	-253.3	348.6	425.5	0.00	0.00	0.00
2,320.0	22.55	126.00	2,245.8	-262.3	361.0	440.7	0.00	0.00	0.00
2,360.0	22.55	126.00	2,282.8	-271.3	373.4	455.8	0.00	0.00	0.00
2,400.0	22.55	126.00	2,319.7	-280.3	385.8	470.9	0.00	0.00	0.00
2,440.0	22.55	126.00	2,356.6	-289.3	398.2	486.1	0.00	0.00	0.00
2,480.0	22.55	126.00	2,393.6	-298.4	410.7	501.2	0.00	0.00	0.00
2,520.0	22.55	126.00	2,430.5	-307.4	423.1	516.4	0.00	0.00	0.00
2,560.0	22.55	126.00	2,467.5	-316.4	435.5	531.5	0.00	0.00	0.00
2,600.0	22.55	126.00	2,504.4	-325.4	447.9	546.7	0.00	0.00	0.00
2,640.0	22.55	126.00	2,541.4	-334.4	460.3	561.8	0.00	0.00	0.00
2,680.0	22.55	126.00	2,578.3	-343.4	472.7	577.0	0.00	0.00	0.00
2,720.0	22.55	126.00	2,615.2	-352.5	485.1	592.1	0.00	0.00	0.00
2,760.0	22.55	126.00	2,652.2	-361.5	497.5	607.3	0.00	0.00	0.00
2,800.0	22.55	126.00	2,689.1	-370.5	509.9	622.4	0.00	0.00	0.00
2,840.0	22.55	126.00	2,726.1	-379.5	522.3	637.6	0.00	0.00	0.00
2,880.0	22.55	126.00	2,763.0	-388.5	534.8	652.7	0.00	0.00	0.00
2,920.0	22.55	126.00	2,799.9	-397.5	547.2	667.9	0.00	0.00	0.00
2,960.0	22.55	126.00	2,836.9	-406.6	559.6	683.0	0.00	0.00	0.00
3,000.0	22.55	126.00	2,873.8	-415.6	572.0	698.2	0.00	0.00	0.00
3,040.0	22.55	126.00	2,910.8	-424.6	584.4	713.3	0.00	0.00	0.00
3,080.0	22.55	126.00	2,947.7	-433.6	596.8	728.5	0.00	0.00	0.00
3,120.0	22.55	126.00	2,984.7	-442.6	609.2	743.6	0.00	0.00	0.00
3,160.0	22.55	126.00	3,021.6	-451.6	621.6	758.7	0.00	0.00	0.00
3,200.0	22.55	126.00	3,058.5	-460.7	634.0	773.9	0.00	0.00	0.00
3,240.0	22.55	126.00	3,095.5	-469.7	646.4	789.0	0.00	0.00	0.00
3,280.0	22.55	126.00	3,132.4	-478.7	658.9	804.2	0.00	0.00	0.00
3,320.0	22.55	126.00	3,169.4	-487.7	671.3	819.3	0.00	0.00	0.00
3,360.0	22.55	126.00	3,206.3	-496.7	683.7	834.5	0.00	0.00	0.00
3,400.0	22.55	126.00	3,243.2	-505.7	696.1	849.6	0.00	0.00	0.00
3,440.0	22.55	126.00	3,280.2	-514.8	708.5	864.8	0.00	0.00	0.00
3,480.0	22.55	126.00	3,317.1	-523.8	720.9	879.9	0.00	0.00	0.00
3,520.0	22.55	126.00	3,354.1	-532.8	733.3	895.1	0.00	0.00	0.00
3,560.0	22.55	126.00	3,391.0	-541.8	745.7	910.2	0.00	0.00	0.00
3,600.0	22.55	126.00	3,428.0	-550.8	758.1	925.4	0.00	0.00	0.00
3,640.0	22.55	126.00	3,464.9	-559.8	770.5	940.5	0.00	0.00	0.00
3,678.0	22.55	126.00	3,500.0	-568.4	782.3	954.9	0.00	0.00	0.00
3,680.0	22.54	126.10	3,501.8	-568.9	783.0	955.7	2.00	-0.29	5.16
3,720.0	22.44	128.18	3,538.8	-578.1	795.2	970.8	2.00	-0.26	5.18
3,760.0	22.36	130.27	3,575.8	-587.7	807.0	986.0	2.00	-0.19	5.22
3,800.0	22.31	132.37	3,612.8	-597.8	818.4	1,001.1	2.00	-0.12	5.25
3,840.0	22.29	134.47	3,649.8	-608.2	829.4	1,016.3	2.00	-0.06	5.27
3,880.0	22.30	136.58	3,686.8	-619.0	840.0	1,031.5	2.00	0.01	5.27
3,920.0	22.33	138.69	3,723.8	-630.2	850.3	1,046.7	2.00	0.08	5.26
3,960.0	22.39	140.79	3,760.8	-641.9	860.1	1,061.8	2.00	0.15	5.24
4,000.0	22.47	142.87	3,797.8	-653.8	869.5	1,077.0	2.00	0.21	5.21
4,026.5	22.55	144.24	3,822.3	-662.0	875.6	1,087.0	2.00	0.27	5.18
4,040.0	22.55	144.24	3,834.7	-666.2	878.6	1,092.1	0.00	0.00	0.00
4,080.0	22.55	144.24	3,871.7	-678.7	887.5	1,107.3	0.00	0.00	0.00
4,120.0	22.55	144.24	3,908.6	-691.1	896.5	1,122.4	0.00	0.00	0.00
4,160.0	22.55	144.24	3,945.5	-703.5	905.5	1,137.5	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Ashton J33-21D
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Site:	Ashton J33-21D Pad Sec.33-T5N-R66W	North Reference:	True
Well:	Ashton J33-21D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (08-04-09)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,200.0	22.55	144.24	3,982.5	-716.0	914.4	1,152.7	0.00	0.00	0.00
4,240.0	22.55	144.24	4,019.4	-728.4	923.4	1,167.8	0.00	0.00	0.00
4,280.0	22.55	144.24	4,056.4	-740.9	932.4	1,183.0	0.00	0.00	0.00
4,320.0	22.55	144.24	4,093.3	-753.3	941.3	1,198.1	0.00	0.00	0.00
4,360.0	22.55	144.24	4,130.3	-765.8	950.3	1,213.3	0.00	0.00	0.00
4,400.0	22.55	144.24	4,167.2	-778.2	959.2	1,228.4	0.00	0.00	0.00
4,440.0	22.55	144.24	4,204.1	-790.7	968.2	1,243.5	0.00	0.00	0.00
4,480.0	22.55	144.24	4,241.1	-803.1	977.2	1,258.7	0.00	0.00	0.00
4,520.0	22.55	144.24	4,278.0	-815.6	986.1	1,273.8	0.00	0.00	0.00
4,560.0	22.55	144.24	4,315.0	-828.0	995.1	1,289.0	0.00	0.00	0.00
4,600.0	22.55	144.24	4,351.9	-840.5	1,004.0	1,304.1	0.00	0.00	0.00
4,640.0	22.55	144.24	4,388.9	-852.9	1,013.0	1,319.2	0.00	0.00	0.00
4,680.0	22.55	144.24	4,425.8	-865.3	1,022.0	1,334.4	0.00	0.00	0.00
4,720.0	22.55	144.24	4,462.7	-877.8	1,030.9	1,349.5	0.00	0.00	0.00
4,760.0	22.55	144.24	4,499.7	-890.2	1,039.9	1,364.7	0.00	0.00	0.00
4,800.0	22.55	144.24	4,536.6	-902.7	1,048.9	1,379.8	0.00	0.00	0.00
4,840.0	22.55	144.24	4,573.6	-915.1	1,057.8	1,394.9	0.00	0.00	0.00
4,880.0	22.55	144.24	4,610.5	-927.6	1,066.8	1,410.1	0.00	0.00	0.00
4,920.0	22.55	144.24	4,647.5	-940.0	1,075.7	1,425.2	0.00	0.00	0.00
4,960.0	22.55	144.24	4,684.4	-952.5	1,084.7	1,440.4	0.00	0.00	0.00
5,000.0	22.55	144.24	4,721.3	-964.9	1,093.7	1,455.5	0.00	0.00	0.00
5,040.0	22.55	144.24	4,758.3	-977.4	1,102.6	1,470.6	0.00	0.00	0.00
5,080.0	22.55	144.24	4,795.2	-989.8	1,111.6	1,485.8	0.00	0.00	0.00
5,120.0	22.55	144.24	4,832.2	-1,002.3	1,120.5	1,500.9	0.00	0.00	0.00
5,160.0	22.55	144.24	4,869.1	-1,014.7	1,129.5	1,516.1	0.00	0.00	0.00
5,200.0	22.55	144.24	4,906.1	-1,027.1	1,138.5	1,531.2	0.00	0.00	0.00
5,240.0	22.55	144.24	4,943.0	-1,039.6	1,147.4	1,546.4	0.00	0.00	0.00
5,280.0	22.55	144.24	4,979.9	-1,052.0	1,156.4	1,561.5	0.00	0.00	0.00
5,320.0	22.55	144.24	5,016.9	-1,064.5	1,165.4	1,576.6	0.00	0.00	0.00
5,360.0	22.55	144.24	5,053.8	-1,076.9	1,174.3	1,591.8	0.00	0.00	0.00
5,400.0	22.55	144.24	5,090.8	-1,089.4	1,183.3	1,606.9	0.00	0.00	0.00
5,440.0	22.55	144.24	5,127.7	-1,101.8	1,192.2	1,622.1	0.00	0.00	0.00
5,480.0	22.55	144.24	5,164.7	-1,114.3	1,201.2	1,637.2	0.00	0.00	0.00
5,520.0	22.55	144.24	5,201.6	-1,126.7	1,210.2	1,652.3	0.00	0.00	0.00
5,560.0	22.55	144.24	5,238.6	-1,139.2	1,219.1	1,667.5	0.00	0.00	0.00
5,600.0	22.55	144.24	5,275.5	-1,151.6	1,228.1	1,682.6	0.00	0.00	0.00
5,640.0	22.55	144.24	5,312.4	-1,164.1	1,237.1	1,697.8	0.00	0.00	0.00
5,680.0	22.55	144.24	5,349.4	-1,176.5	1,246.0	1,712.9	0.00	0.00	0.00
5,720.0	22.55	144.24	5,386.3	-1,188.9	1,255.0	1,728.0	0.00	0.00	0.00
5,760.0	22.55	144.24	5,423.3	-1,201.4	1,263.9	1,743.2	0.00	0.00	0.00
5,800.0	22.55	144.24	5,460.2	-1,213.8	1,272.9	1,758.3	0.00	0.00	0.00
5,840.0	22.55	144.24	5,497.2	-1,226.3	1,281.9	1,773.5	0.00	0.00	0.00
5,880.0	22.55	144.24	5,534.1	-1,238.7	1,290.8	1,788.6	0.00	0.00	0.00
5,920.0	22.55	144.24	5,571.0	-1,251.2	1,299.8	1,803.8	0.00	0.00	0.00
5,953.1	22.55	144.24	5,601.6	-1,261.5	1,307.2	1,816.3	0.00	0.00	0.00
5,960.0	22.41	144.24	5,608.0	-1,263.6	1,308.7	1,818.9	2.00	-2.00	0.00
6,000.0	21.61	144.24	5,645.1	-1,275.8	1,317.5	1,833.7	2.00	-2.00	0.00
6,040.0	20.81	144.24	5,682.4	-1,287.5	1,326.0	1,848.0	2.00	-2.00	0.00
6,080.0	20.01	144.24	5,719.8	-1,298.8	1,334.1	1,861.7	2.00	-2.00	0.00
6,120.0	19.21	144.24	5,757.5	-1,309.7	1,341.9	1,875.0	2.00	-2.00	0.00
6,160.0	18.41	144.24	5,795.4	-1,320.2	1,349.5	1,887.7	2.00	-2.00	0.00
6,200.0	17.61	144.24	5,833.4	-1,330.2	1,356.7	1,899.9	2.00	-2.00	0.00
6,240.0	16.81	144.24	5,871.6	-1,339.8	1,363.6	1,911.6	2.00	-2.00	0.00
6,280.0	16.01	144.24	5,910.0	-1,349.0	1,370.2	1,922.8	2.00	-2.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Ashton J33-21D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4818.0ft (Original Well Elev)
Project:	SEC.33-T5N-R66W	MD Reference:	WELL @ 4818.0ft (Original Well Elev)
Site:	Ashton J33-21D Pad Sec.33-T5N-R66W	North Reference:	True
Well:	Ashton J33-21D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (08-04-09)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,320.0	15.21	144.24	5,948.5	-1,357.7	1,376.5	1,933.4	2.00	-2.00	0.00
6,360.0	14.41	144.24	5,987.2	-1,366.0	1,382.5	1,943.5	2.00	-2.00	0.00
6,400.0	13.61	144.24	6,026.0	-1,373.9	1,388.1	1,953.0	2.00	-2.00	0.00
6,440.0	12.81	144.24	6,065.0	-1,381.3	1,393.5	1,962.1	2.00	-2.00	0.00
6,480.0	12.01	144.24	6,104.0	-1,388.3	1,398.5	1,970.5	2.00	-2.00	0.00
6,520.0	11.21	144.24	6,143.2	-1,394.8	1,403.2	1,978.5	2.00	-2.00	0.00
6,560.0	10.41	144.24	6,182.5	-1,400.9	1,407.6	1,985.9	2.00	-2.00	0.00
6,600.0	9.61	144.24	6,221.9	-1,406.5	1,411.7	1,992.8	2.00	-2.00	0.00
6,640.0	8.81	144.24	6,261.4	-1,411.7	1,415.4	1,999.1	2.00	-2.00	0.00
6,680.0	8.01	144.24	6,300.9	-1,416.5	1,418.8	2,004.8	2.00	-2.00	0.00
6,720.0	7.21	144.24	6,340.6	-1,420.8	1,421.9	2,010.1	2.00	-2.00	0.00
6,760.0	6.41	144.24	6,380.3	-1,424.6	1,424.7	2,014.8	2.00	-2.00	0.00
6,800.0	5.61	144.24	6,420.1	-1,428.0	1,427.1	2,018.9	2.00	-2.00	0.00
6,840.0	4.81	144.24	6,459.9	-1,431.0	1,429.2	2,022.5	2.00	-2.00	0.00
6,880.0	4.01	144.24	6,499.8	-1,433.5	1,431.0	2,025.5	2.00	-2.00	0.00
6,920.0	3.21	144.24	6,539.7	-1,435.5	1,432.5	2,028.0	2.00	-2.00	0.00
6,960.0	2.41	144.24	6,579.7	-1,437.1	1,433.7	2,029.9	2.00	-2.00	0.00
7,000.0	1.61	144.24	6,619.7	-1,438.2	1,434.5	2,031.3	2.00	-2.00	0.00
7,040.0	0.81	144.24	6,659.6	-1,438.9	1,435.0	2,032.1	2.00	-2.00	0.00
7,080.0	0.01	144.24	6,699.6	-1,439.1	1,435.1	2,032.4	2.00	-2.00	0.00
7,080.4	0.00	0.00	6,700.0	-1,439.1	1,435.1	2,032.4	2.00	-2.00	0.00
TARGET BHL 2501'FSL, 2570'FEL									
7,120.0	0.00	0.00	6,739.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
7,160.0	0.00	0.00	6,779.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
7,200.0	0.00	0.00	6,819.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
7,240.0	0.00	0.00	6,859.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
7,280.0	0.00	0.00	6,899.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
7,320.0	0.00	0.00	6,939.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
7,338.4	0.00	0.00	6,958.0	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
NIOBRARA									
7,360.0	0.00	0.00	6,979.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
7,400.0	0.00	0.00	7,019.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
7,440.0	0.00	0.00	7,059.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
7,480.0	0.00	0.00	7,099.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
7,520.0	0.00	0.00	7,139.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
7,560.0	0.00	0.00	7,179.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
7,600.0	0.00	0.00	7,219.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
7,640.0	0.00	0.00	7,259.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
7,658.4	0.00	0.00	7,278.0	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
CODELL									
7,680.0	0.00	0.00	7,299.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
7,720.0	0.00	0.00	7,339.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
7,760.0	0.00	0.00	7,379.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
7,800.0	0.00	0.00	7,419.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
7,840.0	0.00	0.00	7,459.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
7,880.0	0.00	0.00	7,499.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
7,920.0	0.00	0.00	7,539.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
7,960.0	0.00	0.00	7,579.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
8,000.0	0.00	0.00	7,619.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
8,040.0	0.00	0.00	7,659.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
8,072.4	0.00	0.00	7,692.0	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
D-SAND									
8,080.0	0.00	0.00	7,699.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Ashton J33-21D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4818.0ft (Original Well Elev)
Project:	SEC.33-T5N-R66W	MD Reference:	WELL @ 4818.0ft (Original Well Elev)
Site:	Ashton J33-21D Pad Sec.33-T5N-R66W	North Reference:	True
Well:	Ashton J33-21D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (08-04-09)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,120.0	0.00	0.00	7,739.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
8,148.4	0.00	0.00	7,768.0	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
J-SAND									
8,160.0	0.00	0.00	7,779.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
8,200.0	0.00	0.00	7,819.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
8,240.0	0.00	0.00	7,859.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
8,280.0	0.00	0.00	7,899.6	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
8,298.4	0.00	0.00	7,918.0	-1,439.1	1,435.1	2,032.4	0.00	0.00	0.00
HARDLINES 88°N AND 81°W OF BHL									

Targets
Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
TARGET BHL 2501'F - plan hits target center - Point	0.00	0.00	6,700.0	-1,439.1	1,435.1	1,373,321.56	3,199,454.21	40° 21' 21.454 N	104° 47' 3.518 W
HARDLINES 88°N AN - plan misses target center by 119.7ft at 8298.4ft MD (7918.0 TVD, -1439.1 N, 1435.1 E) - Polygon	0.00	0.00	7,918.0	-1,351.1	1,354.1	1,373,408.94	3,199,372.48	40° 21' 22.324 N	104° 47' 4.565 W
Point 1			7,918.0	0.0	0.0	1,373,408.94	3,199,372.48		
Point 2			7,918.0	0.0	200.0	1,373,410.55	3,199,572.46		
Point 3			7,918.0	0.0	0.0	1,373,408.94	3,199,372.48		
Point 4			7,918.0	-200.0	0.0	1,373,208.96	3,199,374.08		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,338.4	6,958.0	NIOBRARA		0.00	
7,658.4	7,278.0	CODELL		0.00	
8,072.4	7,692.0	D-SAND		0.00	
8,148.4	7,768.0	J-SAND		0.00	